```
R version 4.2.2 (2022-10-31 ucrt) -- "Innocent and Trusting"
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Platform: x86_64-w64-mingw32/x64 (64-bit)

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  Natural language support but running in an English locale

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Type 'q()' to quit R.

> set.seed(243)
> x <- replicate(10000, max(rexp(1, (1/10)), rexp(1, (1/10))))
>  hist(x, prob = T, ylim = c(0, 0.1), xlab = "time", ylab = "Probability",     main = "Histogram
")
>  pdf.f <- function(x){
+  return(0.2*exp(-0.1*x) - 0.2*exp(-0.2*x))
+  }
>  curve(pdf.f, from = 0, to = max(x), add = T)
>  simulation.f <- function(nsim, lambda.A = (1/10), lambda.B = (1/10)){
+  x <- replicate(nsim, max(rexp(1, lambda.A), rexp(1, lambda.B)))
+  result <- c(mean = mean(x), prob = mean(x > 15))
+  return(result)
+  }
>  set.seed(243)
>
> round(replicate(7, sim.fun(1000)), 3)
Error in sim.fun(1000) : could not find function "sim.fun"
> round(replicate(7, sim.fun(1000)), 3)
Error in sim.fun(1000) : could not find function "sim.fun"
> round(replicate(7, simultion.f(1000)), 3)
Error in simultion.f(1000) : could not find function "simultion.f"
> round(replicate(7, simulation.f(1000)), 3)
       [,1]   [,2]   [,3]   [,4]   [,5]   [,6]   [,7]
mean 15.884 14.764 15.146 15.157 15.250 15.492 14.963
prob  0.426  0.384  0.397  0.402  0.397  0.429  0.402
> round(replicate(7, simulation.f(10000)), 3)
       [,1]   [,2]   [,3]   [,4]   [,5] [,6]   [,7]
mean 14.981 15.001 15.018 15.103 14.875 15.1 15.151
prob  0.396  0.395  0.399  0.402  0.392  0.4  0.404
> round(replicate(7, simulation.f(100000)), 3)
       [,1]   [,2]   [,3]   [,4]   [,5]   [,6]   [,7]
mean 15.016 14.969 15.049 15.016 15.017 14.990 15.003
prob  0.398  0.395  0.399  0.396  0.397  0.397  0.397
>
```